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Presentation Session: Poster Session B

Abstract Title: Adapting to Survive: How *Candida glabrata* Responds to Environmental Physiological Constraints

Topic: Communities – Biofilms and Microbial Interactions

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Abstract:

Candida glabrata is considered a major opportunistic human pathogen and has emerged as a leading cause of nosocomial fungal infections. In order to survive and proliferate within the human host, this fungus has to adapt to the different niches and assimilate the available nutrients. During infection, *C. glabrata* can encounter glucose-poor microenvironments and some studies have suggested that the ability to use alternative non-fermentable carbon sources, such as carboxylic acids, affects the virulence of these fungi. Our studies have demonstrated that the presence of acetate influences *C. glabrata* biofilm formation, antifungal drug resistance and immune recognition. Additionally, there is evidence that putative acetate transporters and channels have a role on these processes. In order to extend our studies and provide a comprehensive view on how *C. glabrata* biofilms respond to alternative carbon sources and antifungal treatment, we performed comparative transcriptomics analyses using RNA-sequencing. An overview of the most significant results will be presented. Our data support the view that adaptive responses of *Candida* cells to the different carbon sources present in host niches affect their virulence, through multifarious mechanisms.